

cementogenesis and calcifying fibrous epulis are different ways to describe a benign fibro-osseous lesion of the jaws consisting of cellular fibroblastic tissue containing rounded or lobulated masses of calcified cementum. PCF is a reactive focal overgrowth of gingival mucosa that is considered to be reactive rather than neoplastic. It has also been reported that it represents a maturation of a pre-existing pyogenic granuloma or of a peripheral giant cell granuloma. It can be differentiated from the central type, that arises from endosteum or the periodontal ligament adjacent to the root apex and causes expansion of the bone; the peripheral type is localized on the gingiva or on the mucosa. PCF appears as a nodular mass, either pedunculated or sessile. The color ranges from red to pink, and the surface is frequently, but not always, ulcerated. It occurs approximately 2 to 4 times more frequently in females than in males most often between 25 and 35 years of age. It has a slight predilection for anterior jaw segments. The recurrence rate is high. It has been reported in the literature from 9 to 20%. The aim of this article is to present a case of PCF focusing on the management and the surgical approach.

METHODS: A 12 years old female referred for an intraoral swelling lasting about one year in the anterior right maxilla; it originated from the interdental papilla between 1.1 and 1.3, with 1.2 orally sited. Medical and family history was non-contributory. The mass was painless, smooth, mobile, sessile, pink and firm in consistency, in addition, from the radiographic examination was observed the involvement of bone. The excisional biopsy and the debridement of the elements involved, to prevent the recurrence, were performed. The bone was smoothened using a surgical bur. The patient was informed about the postoperative instructions and medications were prescribed.

RESULTS: The complete healing was observed within 21 days and the patient was ready to start her orthodontics therapy for repositioning the element 1.2. The histopathologic exam confirmed the diagnosis of calcifying fibroblastic granuloma. **CONCLUSIONS:** Histological exam is mandatory in the diagnosis of PCF. Furthermore, excisional biopsy, flap reflection and debridement were essential to prevent recurrence. According to the literature, it is suggested to perform periodic follow-up for a period up to 10 years.

The role of human papillomavirus in oral cancer and oral potentially malignant disorders

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BACKGROUND: Human Papillomavirus (HPV) infection (mainly HPV16 and 18) is responsible for more than 70% of oropharyngeal cancers in Europe and United States, and about 5% of oral squamous cell carcinomas (OSCC). Interestingly, High-Risk HPV types (16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59 and 68) may also play a role in the development of a subset of leukoplakias, and Immuno-mediated disorders such as oral lichen planus (OLP). As such, the aim of this study was to identify and compare the presence of HPV in

patients affected by oral benign lesions, leukoplakia, Immuno-mediated lesions and OSCC.

METHODS: We collected demographic information, social history and HPV status for 99 patients who were seen at the Oral Medicine Unit at the Department of Oral and Maxillofacial Sciences, Sapienza Università di Roma. HPV status was classified by High Risk Type (16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59 and 68) and Low Risk Type (6, 11, 40, 42, 43, 44, 53, 54, 61, 72, 73 and 81). For the purpose of this study we compared the HPV status across four groups (benign lesions vs. leukoplakia vs. OLP vs. OSCC) and by histology for those patients with a clinical diagnosis of leukoplakia (dysplasia vs. Keratosis of Unknown Significance). All p-values were considered to be statistically significant at $p < 0.05$.

RESULTS: Overall there were 22 patients with oral benign lesions (22,2%), 38 patients with leukoplakia (38,3%), 20 patients with OLP (20,2%), and 19 patients with OSCC (19,2%). The median age at diagnosis was 60 years (range: 12-87). Approximately 27,0% of the patients were never smokers. Alcohol consumption was reported by 35,3%. Among patients with benign lesions ($n=22$), three (13,6%) were HPV16 positive; among those affected by leukoplakia ($n=38$), four (10,5%) were HR positive (16,18), and four (10,5%) were LR positive (6,12,70). Four out of twenty (20,0%) patients with OLP were HPV positive; three were HR (16,58) positive and one LR (6) positive. No patients with OSCC were HPV positive. When histology was considered, six out of 32 patients with KUS (18,8%) were HPV-HR positive (50,0%) and LR positive (50,0%). Among patients with epithelial dysplasia, two out of eight (25,0%) were HPV positive (one HR [50,0%] and one LR [50,0%]). Among oral HPV positive patients, the tongue was the most common infected site (30,0% of positivity). There were no statistically significant differences between current smokers and never smokers and HPV status ($p=0.06$).

CONCLUSIONS: This study evaluated the prevalence of HPV infection among patients with oral benign lesions, leukoplakia, immune-related disorders and OSCC detected with a non-invasive technique. As expected, there was no association between HPV infection and OSCC. Even though the prevalence of HPV infection was similar among patients with oral benign lesions and leukoplakia and OLP, individuals with leukoplakia had the highest rate of infection (21,1%). Future studies should include a larger sample of patients and additional Immunohistochemistry (IHC) studies for the detection of HPV.

Local anesthetics efficacy on patients affected by Ehlers-Danlos syndrome

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BACKGROUND: Ehlers-Danlos Syndrome [EDS] is a group of rare heritable connective tissue disorders, which vary from mildly loose joints to life-threatening complications. EDS is classified by Villefranche that recognizes six major types: the classical type (I and II), the hypermobility type (III) [EDS-HT], the vascular type (IV), the kyphoscoliosis type (VIA), the arthrochalasia types (VIIA and VIIB), and the dermatosparaxis type (VIIC). The types are distinguished by their signs and symptoms, their underlying genetic causes, and their patterns of inheritance. According to Villefranche Classification, EDS - HT is the most frequent form and is characterized by joint hyperlaxity, recurrent joint dislocations, mild skin hyperextensibility, tissue fragility and extra-musculoskeletal mani-

ABSTRACT

festations. Hypermobility type is also tied to a sort of inefficacy of local anesthesia, most likely to an excessive dispersion of the local anesthetic in the tissues. Chronic pain is a serious complication of the condition and can be both physically and psychologically disabling. Psychological dysfunction, psychosocial impairment, and emotional problems are common. On a molecular and microscopic level, EDS is characterized by alterations of extracellular matrix: collagen fibrils are organized into tissue-specific macroaggregates because of a disorder of fibrillar collagen metabolism; there's also an increase of Mast cells (MCs) number or an increase MCs activity due to a Mast cell activation disorder (MCAD). MCs exhibit different biological properties: phagocytosis, antigen presentation, cytokine production, and the immediate release of vasoactive substances. The aim of this paper is to describe our experience with a EDS patient that come to our attention after local anesthesia multiple failures.

CASE REPORT: The patient was a 44-year-old woman affected by EDS-HT, rheumatoid arthritis, fibromyalgia, hyperinsulinaemia and thrombophilia. She has come to our attention because she was feeling pain in right and left upper molar regions due to destructive decays of 1.6 and 2.6; it was decided to extract both the teeth. The preliminary visit showed that the patient referred a bad experience with her previous dentist with an extreme pain during previous treatments. On the day of surgery the patient underwent sedative and analgesic premedication with 10 drops of Diazepam and Paracetamol 1000 intravenously, local anesthesia (Mepivacaine + Adrenaline 1:100.000) and a painless surgical technique like pulling mobile tissues and compressing not mobile tissues during anesthesia. Postoperative treatment consisted in 3 more days of Amoxicillin + Clavulanic Acid 1g, Paracetamol 1000mg on demand and Chlorhexidine 0,2% mouthwashes for a week. After 7 days suture was removed.

DISCUSSION: Vasodilatory activity of MCs may be an important aspect of the observed resistance to local anesthesia in EDS patients. In fact anesthetic residence time in the site of injection depends on blood flow: if blood flow increases, the anesthetic is quickly removed and its efficacy shorter. Furthermore, not all local anesthetics have the same duration of action, it depends on active substances and on efficacy as pharmacokinetic parameter. We have investigated the better anesthetic to use in patients affected by EDS - HT because different active substances have different effects: for example, Mepivacaine with Adrenaline could remain in place for a longer period of time than Lidocaine.

CONCLUSIONS: Our main target is pain control. It's important to investigate patient previous experiences with anesthesia, be flexible choosing local anesthetic and do some tests to find the effective one. Sedative premedication can be useful to control anxiety and pain perception. Local vasoconstrictor in anesthetic management of EDS patients is essential in absence of contraindication.

Intraoral ultrasonography in oral pathology: a narrative review

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BACKGROUND: Ultrasonography has been used in medical fields for decades, but nowadays recent progress in tech-

nology have led to the applications in many maxillofacial procedures.

The introduction of latest generation equipments, different sizes of transducers, ultrasound (US) elastography and Color-Doppler has provided enhanced spatial resolution. US is generally used transcutaneously; however, intraoral US has recently been drawing more interest. US possible applications ranges from pre-operative evaluation to post-operative management of patients. US is harmlessness, non-invasive, effective cost, repeatable and avoid of metal artefacts caused by dental restorations. Disadvantages of US include difficulty in imaging intraboned structures and its dependence on a trained operator. The aim of this narrative review is to analyze the potential role of intraoral US in oral pathology, showing possibilities and limits of this technique in daily clinical practice.

METHODS: Bibliographical research was performed using PubMed and Embase databases, selecting original articles published from January 1990 to February 2018. The following keywords and the Boolean operators "AND" and "OR" were used in combining more keywords: "ultrasound, ultrasonography, intraoral, oral cavity, oral cancer, oral vascular lesions, oral vascular malformations, salivary glands, scialothiasis". We excluded from this search: articles not published in English, case reports, letters to the editor and/or no-human studies. Images were intraorally obtained with an E-CUBE 15 EX scanner (Alpinion®, Seoul, Korea) with an 3-12 MHz and 15 MHz transducers.

RESULTS: 158 publications were identified. Intraoral US can be clinically applied in oral pathology to evaluate oral vascular lesions, soft tissue diseases and salivary gland disease. About oral vascular lesions, Color Doppler US is an effective tool in the management of vascular anomalies by obviating, in many cases, the need for biopsy. Specifically, Color-Doppler spectral curve analysis of a blood vessel determines the haemodynamic characteristics, in order to plan the most appropriate and safety treatment. Furthermore, Werner and Miyazaki have suggested the use of US for driving laser fiber insertion in the intraoral photocoagulation in the vascular malformations treatment. About soft tissue diseases, recent studies have evaluated the use of US to evaluate pre-operatively tumor thickness and tumor depth in early oral cancer, in order to establish the need for neck-dissection. In fact, the decrease of tumor size corresponds to a reduced specificity and sensitivity of Computer Tomography (CT) and Magnetic Resonance Imaging (MRI). Intraoral US represents an imaging tool for oral palpable soft tissue swellings such as lipomas, lymphangiomas, liposarcomas, schwannomas. According to Gaspari and Wong, US is extremely useful in facilitating the diagnosis of abscesses and delineate their anatomic location, differentiating them from cellulitis. About salivary gland diseases, a near unanimity of authors consider US the first choice in the detection of salivary glands diseases; recent studies have shown the validity and reliability of US in the detection of small ductal calculi, while transcutaneous US is recommended for intraparenchymal calculi.

CONCLUSIONS: Since the recent improvements, US offers new prospects in oral pathology with a features and utility comparable with CT and MRI. Unfortunately, US is considered one of the most complex examinations to be interpreted, requiring a specialist with deep knowledge of the head-neck area. In conclusion, US should become an integral part of diagnostic flow chart in oral pathology.